



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## The Polyporaceae of North America—XII. A synopsis of the white and bright-colored pileate species

WILLIAM ALPHONSO MURRILL

A synopsis of species with brown context was given in article XI of this series. The present paper deals with the genera and the principal described species having a white or bright-colored context and a distinct pileus. The species of certain genera are so numerous that they must form the subject of a separate article.

### SUBFAMILY I. POLYPOREAE

It is not always possible to draw a distinct line of cleavage in this group. *Microporellus*, for example, has sessile forms which are thin and multizonate; *Funalia*, while usually brown, has some nearly white variations, and *Polyporus arcularius*, *Polyporus Polyporus* and *Polyporus caudicinus* have tubes very similar to those of *Hexagona*.

In distinguishing the subfamilies, also, certain species of *Fomes* are annual at times, while normally annual plants may assume a perennial appearance under favorable conditions. Poroid forms of *Agaricus* are always liable to confuse the beginner. The classification here adopted is acknowledged to be imperfect and artificial, but it is hoped that it will lead to something better when our knowledge of the plants treated is more complete.

#### Synopsis of the Polyporeae with white context

Hymenophore sessile.

Tubes hexagonal, arranged in radiating rows; context thin. 1. *Hexagona*.

Tubes alveolar; context thin, dry, surface zonate. 2. *Favolus*.

Tubes mostly shallow, marginal and obsolete; hymenium hydroid or irpiciform at a very early stage. 3. *Irpiciporus*.

Tubes normally poroid, sometimes irpiciform from the rupture of the dissepiments at maturity.

Hymenium at length separating smoothly from the context. 4. *Piptoporus*.

Hymenium not separating as above.

Pileus very soft, spongy and elastic throughout.

Hymenophore of immense size; tubes small, fragile when dry. 5. *Dendrophagus*.

Hymenophore small; tubes large, not fragile. 6. *Spongiporus*.

- Pileus more or less firm, flexible or rigid.  
 Context duplex, spongy above, firm below; surface sodden and bibulous. 7. *Spongipellis*.  
 Context not duplex as above.  
 Pileus fleshy-tough to woody and rigid; surface rarely zonate.  
 Surface anoderm.  
 Hymenium more or less smoke-colored at maturity. 8. *Bjerkandera*.  
 Hymenium white or pallid.  
 Context fleshy to fleshy-tough, friable when dry. 9. *Tyromyces*.  
 Context punky to corky, not friable when dry. 10. *Trametes*.  
 Surface pelliculose; plants chiefly tropical.  
 Plants small, 5 cm. or less in diameter. 11. *Rigidoporus*.  
 Plants large, more than 5 cm. in diameter.  
 Hymenium flesh-colored. 12. *Eartiella*.  
 Hymenium white or pallid. 13. *Cubamyces*.  
 Pileus thin, leathery and more or less flexible; surface usually zonate.  
 Hymenophore preceded by a cup-shaped sterile body. 14. *Poronidulus*.  
 Hymenophore not as above.  
 Hymenophore normally pileate; tubes small and regular. 15. *Coriolus*.  
 Hymenophore semi-resupinate; tubes irregular. 16. *Coriolellus*.  
 Hymenophore stipitate.  
 Stipe compound. 17. *Grifola*.  
 Stipe simple.  
 Plants fleshy, terrestrial. 18. *Scutigera*.  
 Plants tough, epixylous.  
 Tubes large, hexagonal and radially elongated from the first. 1. *Hexagona*.  
 Tubes not as above.  
 Pileus inverted, erumpent from lenticels. 19. *Porodiscus*.  
 Pileus erect or lateral, not erumpent.  
 Context duplex, spongy above, woody below. 20. *Abortiporus*.  
 Context homogeneous, firm.  
 Surface zonate. 21. *Microporellus*.  
 Surface azonate. 22. *Polyporus*.

1. *HEXAGONA* Pollini, Pl. Nov. 35. *pl.* 2, 3. 1816Type: *Hexagona Mori* Pollini.

Hymenophore small, annual, epixylous, flabelliform to reniform, rarely circular, stipitate, the stipe sometimes much reduced;

surface smooth or tessellated, margin thin; context thin, white, fibrous, fleshy to tough, usually fragile when dry; hymenium of radiating rows of large, thin-walled, hexagonal tubes, usually radially elongated; spores smooth, hyaline.

Species: *H. alveolaris* (DC.) Murr., *H. micropora* Murr., *H. daedalea* (Link) Murr., *H. Wilsonii* Murr., *H. hispidula* (B. & C.) Murr., *H. princeps* (B. & C.) Murr., *H. fragilis* Murr., *H. floridana* Murr., *H. tessellatula* Murr., *H. caprata* (Pat.) Murr., *H. brunncola* (B. & C.) Murr., *H. purpurascens* (B. & C.) Murr., *H. portoricensis* Murr., *H. hondurensis* Murr., *H. indurata* (Berk.) Murr., *H. cucullata* (Mont.) Murr., *H. Taxodii* Murr. [See Bull. Torrey Club 31: 325-333. 1904.]

## 2. FAVOLUS Beauv. Fl. Owar. 1: 1. pl. 1. 1805

Type: *Favolus hirtus* Beauv.

*Scenidium* Kuntze, Rev. Gen. 515. 1893. Type: *Favolus hirtus* Beauv.

Hymenophore small, annual, epixylous, sessile, dimidiate or reniform; surface multizonate, margin thin; context thin, leathery, pallid or brown; tubes alveolar; spores smooth, hyaline.

Species: *F. tenuis* (Hook.) Murr., *F. variegatus* (Berk.) Murr. [See Bull. Torrey Club 32: 99-103. 1905.] The first species is usually white in substance, the other brown.

## 3. Irpiciporus gen. nov.

Type: *Irpex mollis* B. & C.

Hymenophore annual, epixylous, sessile, effused-reflexed, white or pallid throughout; surface anoderm, glabrous or velvety, not distinctly zonate, margin acute; context white, coriaceous or corky; hymenium hydroid or irpiciform with traces of shallow obsolete tubes near the margin; spores smooth, hyaline.

### Synopsis of the North American species

Teeth a centimeter or more in length; pileus often large and thick. *I. mollis*.

Teeth one-half a centimeter or less in length; pileus thin and shortly reflexed.

*I. Tulipiferae*.

### *Irpiciporus mollis* (B. & C.)

*Irpex mollis* B. & C. Hook. Jour. Bot. 1: 236. 1849.

*Irpex crassus* B. & C. Hook. Jour. Bot. 1: 236. 1849.

Described under the former name from Ravenel's collections in South Carolina and under the latter lower down on the same

page from plants collected by Curtis high up on the trunk of a living oak in North Carolina. The distinct zones on the context appear to accompany luxuriant growth, being present in very large plants known by Berkeley as *I. crassus*.

This species is often met with upon decaying wood of oak, locust, apple and various other deciduous trees throughout temperate North America.

New York, *Cook*; New Jersey, *Ellis*; Virginia, *Murrill*; Georgia, *Harper*; Florida, *Calkins*, *Lloyd*; Ohio, *Morgan*; Michigan, *Pieters*.

### **Irpiciporus Tulipiferae (Schw.)**

*Boletus Tulipiferae* Schw. Syn. Fung. Car. 73. 1818.

*Irpex Tulipiferae* Fr. Epicr. 523. 1838.

Described from Schweinitz' Carolina collections on dead trunks of *Liriodendron*, as follows:

"B. P. maxima effusa margine involuto tenui albida, poris maximis acutis prominulis asperis irregularibus."

This species is considered by many the same as *I. sinuosus* Fr. (Elench. Fung. 145. 1828), described from specimens observed for several years on fallen oak branches in Sweden and others sent from Ruthenia by Weinmann. Bresadola goes further and adds *I. lacteus* Fr., *I. canescens* Fr. and *I. Bresadolae* Schulz. to the list of synonyms. In any case, Schweinitz' name is the oldest.

This is one of the commonest fungi in our woods, the thin effused pilei often extending the whole length of branches, and even entire trunks, of dead deciduous trees of all kinds. A few collections are as follows:

Canada, *Macoun*; New York, *Peck*, *Shcar*, *Britton*; Pennsylvania, *Sumstine*, *Murrill*; New Jersey, *Ellis*, *Britton*, *Murrill*; Virginia, *Murrill*; Tennessee, *Murrill*; Ohio, *Selby*, *Morgan*; Missouri, *Demetrio*; Kansas, *Bartholomew*; Wisconsin, *Baker*; Mexico, *Egeling*.

### **SPECIES INQUIRENDÆ**

*IRPEX PALLESCENS* Fr. Epicr. 522. 1838. Described from plants collected by Schweinitz in North America on trunks of *Liriodendron*.

4. PIPTOPORUS Karst. Rev. Myc. 3<sup>9</sup>: 17. 1881

Type: *Boletus betulinus* Bull.

Hymenophore annual, epixylous, umbonate-sessile; surface smooth, azonate, pelliculose; context white, fleshy-tough; hymenium at length separating smoothly from the context, tubes white, thick-walled; spores smooth, cylindrical, hyaline.

Species: *P. suberosus* (L.) Murr. [See Bull. Torrey Club 30: 424, 425. 1903.]

5. **Dendrophagus** gen. nov.

Type: *Polyporus Colossus* Fr.

Hymenophore very large, but of light weight, annual, epixylous, sessile, dimidiate, thick and pulvinate; surface pelliculose, glabrous, azonate, margin very obtuse; context very thick, soft and spongy throughout; tubes small, dark-colored, thin-walled, fragile; spores smooth, hyaline.

**Dendrophagus Colossus** (Fr.)

*Polyporus Colossus* Fr. Nov. Symb. 56. 1851.

Described from material collected by Oersted on stumps of *Cedrela odorata* at Puntarena in Costa Rica as follows:

"Pileo floccoso-suberoso molli crasso pulvinato, *marginē tumido obtusissimo*, primitus cuticula tenella laevi vernicea sulfurea tecto, eaque secedente scabroso, contextu stuppeo mollissimo alutaceo-pallescente, poris minutis elongatis mollibus, intus fusciscentibus."

"Portentum mirabile et magnitudine et ponderis levitate. Fungus dimidiatus, sessilis, reniformis sed undulatus, crassimus (3-4 unc.) etiam in *marginē obtusissimo*, contextu stuppeo-fomentario (nullo modo fibroso ut in *Spongiosis*), mollissima, alutaceo-pallida l. isabellina. Pileus extus quoque mollissimus, ut digito pressus foveas relinquat persistentes, undulatus, more *P. betulinī* tectus cuticula laevi vernicea arcte adnata citrina, et in hoc statu pileus politus apparet, at cuticula secedente scabrosus evadit et decolorans. Pori valde longi et densi, absque trama discolori et a pileo separabiles, ore minuto, exsiccati nigrescentes, intus fusciscentes; in vivo enim admodum molles et hinc in exsiccatis confluent in callum nigricantem absque poris extus conspicuis. Ad truncos ins. *San Jan* Indiae occid. lectus est fungus aequē giganteus, textura eadem, modo obscurior et pondere gravior; sed pileus epelliculosus, scabrosus, nigrescens. Pro forma prioris exoleta habeo."

Plants collected by Millspaugh, *no.* 57838, in Yucatan, appear to be immature specimens of the above species. Oersted's original plants are still preserved at Upsala. Further tropical exploration will doubtless discover more of this remarkable species.

#### 6. *Spongiporus* gen. nov.

Type: *Polyporus leucospongia* Cooke & Hark.

Hymenophore small, annual, epixylous, sessile, dimidiate, pulvinate; surface white, anoderm to subpelliculose, azonate, soft and elastic; context white, extremely soft and spongy throughout; hymenium rigid, somewhat discolored, tubes large, irregular, thin-walled, lacerate; spores smooth, hyaline.

#### *Spongiporus leucospongia* (Cooke & Hark.)

*Polyporus leucospongia* Cooke & Hark. Grevillea **11**: 106. 1883.

This species was described from plants collected by Harkness at an altitude of 2,400 meters in the Sierra Nevada Mts., California, in 1882, growing upon decaying pine and spruce logs. Plants sent to Ellis under the name of *P. labyrinthicus* Schw. were forwarded to Cooke, who said they were clearly not *P. labyrinthicus* and suggested that they be described as new under the name of *Polyporus leucospongia*, an eminently appropriate name, since the whole pileus is pure white and as soft as a delicate sponge when young. Specimens have since been several times collected in Colorado by Bethel at about 3,600 meters on coniferous logs projecting from the snow. In such localities, he says, the plant is common, covering the ends of all such projecting logs. Crandall has also found it in Colorado and Nelson in Wyoming.

In Saccardo's Sylloge this species is queerly mixed with *P. labyrinthicus*, an error which clearly originated at Kew, for the sheet containing specimens of *P. labyrinthicus* labeled "U. S., C. B. Plowright" contains also at the bottom two packets of *P. leucospongia* from Harkness, *no.* 1012, collected in California on *Pinus contorta* and sent, as we know, under the name of *P. labyrinthicus*.

#### 7. SPONGIPELLIS Pat. Hymén. Europ. 140. 1887

Type: *Spongipellis spumcus* (Sow.) Pat.

*Postia* Karst. Rev. Myc. **3**<sup>9</sup>: 17. 1881. (Not *Postia* Boiss. & Blanch. 1875.) Type: *Polyporus borealis* Fr.

Hymenophore annual, epixylous, sessile, dimidiate, simple or imbricate, rather large; surface white, anoderm, sodden and bibulous; context white, duplex, spongy above, firm below; hymenium concolorous, tubes thin-walled; spores smooth, hyaline.

**Synopsis of the North American species**

Context coarsely fibrous; tubes medium; plant common on coniferous wood.

*S. borealis.*

Context finer; tubes smaller; plant found on deciduous wood.

*S. galactinus.*

SPONGIPELLIS BOREALIS (Fr.) Pat. Tax. Hymén. 84. 1900

*Polyporus borealis* Fr. Syst. Myc. 1: 366. 1821.

Described from material collected on trunks of *Abies* in the mountains of Smoland as follows:

"P. albus, pileis fibroso-suberosis mollibus subvillosis, demum subfulventibus, poris tenuibus inaequalibus.

"Recens inodorus, siccus odorem aniseum debilem spargit. Imbricatus, subconcrescens, 2 unc. & ultra latus & crassus, superne convexus, nunc velutinus, nunc strigosus, margine acuto, subtus planus. Pori albi, lacerati, sinuoso & subrotundi, angustissimi, tubulos longos formant."

In the *Elenchus*, Fries separates two varieties, *montanus* and *spathulatus*, and notes that the species is extremely abundant on fir trunks in the mountains of Omberg.

This plant, although well known in Europe and fairly common in the northern parts of America, is still very imperfectly known by many of the botanists and most of the collectors in this country. It occurs on coniferous trees only, being found most frequently in America on the hemlock. Much more needs to be learned of its distribution. From what is known of it in Europe, one would expect to find it throughout North America as far south as Virginia, but American collections are very meager, as the following will show:

Finland, *Karsten*; Sweden, *Romell*; Germany, *Allescher*; Tyrol, *Bresadola*; Scotland, *Berkeley*; Canada, *Dearness*; New York, *Cook*, *Atkinson*, *Murrill*, *Mrs. Livingston*; Pennsylvania, *Gentry*, *Stevenson*.

SPONGIPELLIS GALACTINUS (Berk.) Pat. Tax. Hymén. 84. 1900

*Polyporus galactinus* Berk. Lond. Jour. Bot. 6: 321. 1847.

Collected by Lea on rotten trunks near Waynesville, Ohio, in the autumn of 1844 and thus described by Berkeley:



"Pileus 2-3 inches broad,  $1\frac{1}{2}$  inch long, dimidiate or reniform, and elongated behind, convex uneven, milk-white, clothed with strigose down of a soft, fleshy substance, zoned within and consisting of radiating fibers.

"Hymenium flat, or slightly concave. Pores  $\frac{1}{100}$  of an inch broad, scarcely visible to the naked eye, but giving to the hymenium a silky lustre, white; dissepiments very thin, slightly uneven.

"Nearly allied to *Pol. undulatus* Schwein, and *Pol. symphyton* Schwein. The dried specimens are rigid, and sometimes have the margin dark brown."

This species was determined by Cooke as *P. borealis* and is usually seen under that name in collections. It may be distinguished by its smaller tubes, its less fibrous context and its habit of growing on deciduous instead of coniferous trees. One of its favorite hosts is the apple-tree, on which it has several times been found in New York and Connecticut, growing inside partially decayed trunks or emerging from knot-holes in living trees. When fresh it is pure white or watery white and so full of water that this may be squeezed out as from a sponge. On drying, it usually assumes a sordid tint, especially near the margin.

Specimens are at hand from Canada, *Dearness*; Massachusetts, *Underwood*; Connecticut, *Earle*, *Miss White*; New York, *Underwood*, *Earle*, *Stewart*, *Peck*, *Banker*; Delaware, *Commons*; Ohio, *Morgan*, *Lloyd*.

#### SPECIES INQUIRENDÆ

*BOLETUS UNDULATUS* Schw. Syn. Fung. Car. 70. 1818. *Polyporus undulatus* Fr. Elench. Fung. 87. 1828. Described by Schweinitz from Carolina as follows:

"B. major subimbricatus spongiosus lutescens, pileo undulato hirtio margine zonato, poris minutis candidis. Elegans fungus ad truncos rarius occurrit, in longitudinem expansus, interdum fere substipitatus, aetate indurescens. Pileus basi incrassatus, strigosus hirtus, margine substrigosus."

Fries makes the following comments on this species in the Elenchus:

"Major in longitudinem extensus, interdum postice porrectus, junior spongiosus, aetate indurescens. Pilei basi incrassati, strigosohirti ex Auctore, sed in meo Specimine tantum rugosi et quoad colorem fumosi. Pori minuti, obtusi, integri, in meo specimine sordidi. Caro crassa, fibrosa, subzonata, albida. Mihi *P. fumoso* proximus visus indeque hoc loco collocatus."

TRAMETES MALICOLA B. & C. Jour. Acad. Sci. Phila. II. 3: 209. 1856. Described from specimens collected by Schweinitz on the trunk of an apple-tree at Bethlehem, Pennsylvania, and determined by him as *P. populinus* Fr., being no. 366 in his synopsis. When his herbarium was examined by Berkeley and Curtis, this species was described as new as follows:

"Imbricatus, ligneus; pileis dimidiatis posticé decurrentibus subvillosis subzonatis, ligneo-umbrinis; poris mediis dissepimentis crassis subtomentosis."

8. BJERKANDERA Karst. Medd. Soc. Faun. et Fl.  
Fenn. 5: 38. 1879

Type: *Polyporus adustus* Fr.

*Merisma* Gill. Champ. Fr. 1: 688. 1878. (Not *Merisma* Persoon.) Type: *Boletus imberbis* Bull.

*Myriadoporus* Peck, Bull. Torrey Club 11: 27. 1884. Type: *Myriadoporus adustus* Peck.

Hymenophore annual, epixylous, sessile, anoderm, glabrous, azonate, corky; context white, tough or woody, not friable when dry; tubes thin-walled, more or less smoke-colored, mouths polygonal; spores smooth, hyaline.

The species of *Bjerkandera* will be treated in a future paper.

9. TYROMYCES Karst. Rev. Myc. 3<sup>9</sup>: 17. 1881

Type: *Polyporus chioneus* Fr.

*Leptoporus* Quél. Ench. Fung. 175. 1886. (Not *Leptopora* Raf. 1809.) Type: *Polyporus tephroleucus* Fr.

*Oligoporus* Bref. Unters. 8: 114. pl. 7. f. 12-22. 1889. Type: *Oligoporus farinosus* Bref.

Hymenophore annual, epixylous, sessile, anoderm, azonate, glabrous or nearly so; context white, fibrous, fleshy to fleshy-tough, rigid and friable when dry; tubes thin-walled, white or yellowish, mouths polygonal; spores smooth, hyaline.

The species of *Tyromyces* will be treated in a later number of this series.

10. TRAMETES Fr. Gen. Hymen. 11. 1836.

Type: *Polyporus suaveolens* L.

Hymenophore annual, epixylous, sessile; surface anoderm, white, azonate; context white, homogeneous, coriaceous to soft-

corky; hymenium concolorous, rigid, tubes thin-walled, mouths circular to irregular; spores smooth, hyaline.

The species of this genus will be considered in a later paper.

#### 11. **Rigidoporus** gen. nov.

Type: *Polyporus micromegas* Mont.

Hymenophore annual, at times reviving, epixylous, sessile, dimidiate, conchate, simple or imbricate; surface pelliculose, multizonate, margin thin, incurved when dry; context thin, white, woody, very rigid when dry, tubes minute, regular, light-brown, mouths pruinose when young; spores smooth, hyaline.

#### **Rigidoporus micromegas** (Mont.)

*Polyporus micromegas* Mont. Pl. Cell. Cuba 423. 1842.

*Polyporus plumbeus* Lév. Ann. Sci. Nat. III. Bot. 5: 136. 1846.

*Polystictus rufopictus* Cooke, Grevillea 15: 23. 1886.

Besides the above names, assigned to Cuba and Guadeloupe specimens, there are several manuscript names and doubtless others in publication which refer to the same species.

This plant has been generally known under the name of *P. zonalis* Berk., described from König's Ceylon collections (Ann. Mag. Nat. Hist. 10: Suppl. 375. pl. 10. f. 5. 1843). It is exceedingly common in tropical America and in the states bordering the Gulf of Mexico, occurring usually during wet weather on water-soaked logs of various species of palms and other broad-leaved trees. It is very rigid when dry and the pores are almost invisible. Some of the more recent collections are here mentioned.

Cuba, *Earle, Underwood, Murrill*; Jamaica, *Earle, Underwood*; Porto Rico, *Earle, Wilson*; Florida, *Ricker*; Louisiana, *Langlois*; Alabama, *Underwood, Earle*.

#### 12. **Earliella** gen. nov.

Type: *Earliella cubensis* sp. nov.

Hymenophore medium to large, annual, epixylous, semi-resupinate, thin and dry but rigid; surface pelliculose, glabrous, zonate, more or less reddish-brown in color; context white, coriaceous, zonate; hymenium flesh-colored, tubes medium, irregular, becoming thin-walled; spores smooth, hyaline.

**Earliella cubensis** sp. nov.

Pileus annual, often reviving, semi-resupinate, laterally extended, conchate, imbricate,  $3-6 \times 5-15 \times 0.2-0.5$  cm.; surface thinly encrusted, glabrous, rugose, zonate, dark reddish-brown behind, or leaving a white marginal band 3-12 mm. in width; margin tumid, at length thin, undulate or lobed, fertile; context white, coriaceous, concentrically zonate; tubes 2-3 mm. long, 2-4 to a mm., white within, the mouths deep reddish-flesh-colored, fading to white, dissepiments at first thick, at length becoming thin and irregular with wavy edges; spores ellipsoidal, smooth, hyaline,  $3-4 \times 5-6 \mu$ , cystidia none.

The type plants of this species were collected by Earle and Murrill (*no.* 193) near Herradura, Cuba, March 11, 1905. They grew on a decayed fallen deciduous log in rather moist woods. The species was collected also in the central and eastern parts of Cuba, and appears to be fairly well distributed and quite abundant in the island. It is known also from Jamaica and Central America. Berkeley identified the plant as *Polystictus Persoonii* Fr., which is the same as *Daedalea sanguinea* Kl. (*Linnaea* 8: 481. 1833), described from Wight's collections in the East Indies. I have this latter plant from Hawaii, China, Africa and Australia, and there is a close resemblance between it and the American plant, but I think the two are sufficiently distinct. If *P. rudis* Lév. were better known it might prove to be an earlier name for the American species in question.

Cuba, *Earle & Murrill* 104, 193, 204, 584; Jamaica, *Earle* 489; Mexico, *C. L. Smith*; Nicaragua, *Shimck*.

## SPECIES INQUIRENDÆ

POLYPORUS RUDIS Lév. *Ann. Sci. Nat.* III. Bot. 5: 133. 1846. *Polyporus subfulvus* Cooke, *Trans. Bot. Soc. Edinburgh* 13: 153. 1878. Described from plants collected by Lherminier on trunks in the island of Guadeloupe as follows:

"Pileo coriaceo-suberoso applanato elongato sessili nudo e basi ad marginem acutum sinuosum rugoso-radiato concentrice sulcato, postice nigricante, antice fulvo, poris minutis rotundis ore obtusis fuscescentibus, intus contextuque fulvis."

This description may have been made from an old discolored specimen.

13. **Cubamyces** gen. nov.

Type: *Polyporus cubensis* Mont.

Hymenophore large, annual, epixylous, sessile, thin, dry, conchate; surface pelliculose, glabrous, normally azonate; context white or yellowish, thin, homogeneous, very soft and elastic; hymenium concolorous, tubes small and regular, rather thick-walled, firm and corky, mouths entire; spores smooth, hyaline.

**Cubamyces cubensis** (Mont.)

*Polyporus cubensis* Mont. Ann. Sci. Nat. II. Bot. 8: 364. 1837;  
Pl. Cell. Cuba 404. pl. 16. f. 3. 1842.

Originally described from plants collected near Havana, Cuba, by Sagra. It seems especially abundant in Cuba, but occurs also in southern Florida and Central America.

Cuba, *Underwood & Earle* 543, 544, 596, 1111, 1204, 1443, 1568, *Earle & Murrill* 140, 337, 534, 414; Florida, *Lloyd*; Nicaragua, *Smith*.

## SPECIES INQUIRENDÆ

POLYPORUS HAVANNENSIS B. & C. Jour. Linn. Soc. Bot. 10: 310. 1868. Described from specimens collected by Wright on dead wood in Cuba as follows:

"Pileo dimidiato convexo zonato fulvo-ochraceo e pubescente glabro radiato-ruguloso, margine leviter pulvinato sterili pubescente; hymenio pallido, poris parvis subrotundis acie obtusis. Pileus 2 inches wide, 1 inch long; pores  $\frac{1}{10}$  inch in diameter. Allied to *P. anebus*, B[erk]., but with larger pores."

This species appears to be very near to *C. cubensis*.

## 14. PORONIDULUS Murr. Bull. Torrey Club 31: 425. 1904

Type: *Boletus conchifer* Schw.

Hymenophore annual, tough, sessile, epixylous, at first sterile and cup-like, the fertile portion developing from the sterile; context white, fibrous, tubes short, thin-walled, mouths polygonal; spores ellipsoidal, smooth, hyaline.

Species: *P. conchifer* (Schw.) Murr. [See Bull. Torrey Club 31: 425, 426. 1904.]

## 15. CORIOLUS Quél. Ench. Fung. 175. 1886.

Type: *Polyporus zonatus* Fr.

*Hansenia* Karst. Medd. Soc. Faun. et Fl. Fenn. 5: 39. 1879.  
(Not *Hansenia* Turcz. 1844.) Type: *Boletus hirsutus* Wulf.

Hymenophore annual, epixylous, sessile, zonate, anoderm, hairy or glabrous; context thin, white, flexible, fibrous, leathery; tubes thin-walled, white, at length splitting into irpiciform teeth in several species, mouths polygonal or irregular; spores smooth, hyaline.

The species of this genus will be treated in a later number of this series.

16. **Coriolellus** gen. nov.

Type: *Trametes Sepium* Berk.

Hymenophore small, dry, annual, epixylous, semi-resupinate; surface white, anoderm, usually azonate; context white, thin, fibrous to corky; hymenium concolorous, tubes thin-walled, usually large and irregular, dentate, but not irpiciform; spores smooth, hyaline.

**Coriolellus Sepium** (Berk.)

*Trametes Sepium* Berk. Lond. Jour. Bot. 6: 322. 1847.

Described from specimens collected by Lea on dry fence-rails in Ohio as follows:

“Pilei effused at the base, reflexed above, laterally connate, at first often attached by the vertex or triquetrous, pale wood-coloured, finely tomentose, marked with numerous darker zones. Hymenium pallid, consisting of slightly sinuous pores about  $\frac{1}{30}$ th of an inch in diameter.”

This species occurs on various kinds of structural timber and other dead wood, especially of deciduous trees, throughout most of temperate North America. Oak and chestnut posts and poles with the bark removed frequently supply the sporophores in great numbers. Only a few collections are here mentioned:

Canada, *Macoun*; Connecticut, *Hanmer*; New York, *Underwood*, *Mrs. Livingston* and *Miss Crane*; New Jersey, *Ellis*; Virginia, *Murrill*; South Carolina, *Ravenel*; Tennessee, *Murrill*; Ohio, *Lloyd*; Kansas, *Cragin*.

17. GRIFOLA S. F. Gray, Nat. Arr. Brit. Pl. 1: 643. 1821

Type: *Boletus frondosus* Dicks.

*Polypilus* Karst. Rev. Myc. 3<sup>9</sup>: 17. 1881. Type: *Boletus frondosus* Schrank.

*Meripilus* Karst. Bidr. Findlands Nat. och Folk 37: 33. 1882.

Type: *Boletus giganteus* Pers.

*Cladomeris* Quél. Ench. Fung. 167. 1886. Type: *Polyporus umbellatus* Fr.

Hymenophore large, annual, stipitate, compound, intricately branched or lobed, humus-loving or epixylous, rarely terrestrial, usually found at the base of a tree-trunk; surface smooth, pallid to gray or brown; context white, fleshy or fleshy-tough, rigid and fragile when dry; tubes large, irregular, thin-walled, becoming friable or laciniate with age; spores hyaline, smooth, rarely verrucose.

Species: *G. poripes* (Fr.) Murr., *G. Sumstinei* Murr., *G. frondosa* (Dicks.) S. F. Gray, *G. ramosissima* (Scop.) Murr., *G. Berkeleyi* (Fr.) Murr., *G. fractipes* (B. & C.) Murr. [See Bull. Torrey Club **31**: 333-338. 1904].

18. SCUTIGER Paul. Icon. Champ. *pl.* 31. *f.* 1-3. 1793

Type: *Scutiger tuberosus* Paul.

*Albatrellus* S. F. Gray Nat. Arr. Brit. Pl. **1**: 645. 1821. Type: *Boletus albidus* Pers.

*Caloporus* Quél. Ench. Fung. 164. 1886. Type: *Boletus sub-squamosus* L.

Hymenophore simple, terrestrial annual, mesopous, usually bright-colored: surface anoderm, variously decorated; context white, rarely colored, fleshy to tough, rigid and fragile when dry; hymenium porose, white or colored, tubes thin-walled; spores smooth, hyaline.

Species: *S. Ellisii* (Berk.) Murr., *S. retipes* (Underw.) Murr., *S. decurrens* (Underw.) Murr., *S. cryptopus* (Ell. & Barth.) Murr., *S. lacticolor* Murr., *S. caeruleoporus* (Peck) Murr., *S. holocyaneus* (Atk.) Murr., *S. radicans* (Schw.) Murr., *S. subradicans* Murr., *S. griseus* (Peck) Murr., *S. persicinus* (B. & C.) Murr., *S. Whitcae* Murr. [See Bull. Torrey Club **30**: 425-432. 1903].

19. PORODISCUS Murr. Bull. Torrey Club **30**: 432. 1903

Type: *Peziza pendula* Schw.

*Enslinia* Fr. Summ. Veg. Scand. 399. 1849. (Not *Enslinia* Rchb. 1827.) Type: *Sphaeria pocula* Schw.

Hymenophore small, annual, tough, epixylous, erumpent from the lenticels of dead branches; stipe attached to the vertex of the pileus, usually curved at maturity; context white, fibrous, tubes cylindrical, short, one-layered, mouths constricted; spores globose, smooth, hyaline.

Species: *P. pendulus* (Schw.) Murr. [See Bull. Torrey Club **30**: 432-434. 1903].

20. ABORTIPORUS Murr. Bull. Torrey Club **31**: 421. 1904Type: *Boletus distortus* Schw.

Hymenophore annual, tough, humus-loving; stipe normally central, often obsolete; context yellowish-white, duplex, spongy above, woody below, tubes thin-walled, mouths polygonal; spores subglobose, smooth, hyaline.

Species: *A. distortus* (Schw.) Murr. [See Bull. Torrey Club **31**: 421, 422. 1904].

21. **Microporellus** gen. nov.Type: *Polyporus dealbatus* B. & C.

Hymenophore thin, annual, epixyloous, usually flabelliform, stipitate, the stipe variously attached and sometimes much reduced; surface anoderm, multizonate; context thin, white, fibrous, rigid and fragile when dry; tubes very minute, regular, thin-walled, fragile when dry; spores smooth, hyaline.

**Synopsis of the North American species**

Plants white or pale brownish, the color not changing when dry.  
Plants lurid, becoming black when dry.

*M. dealbatus.**M. holotephrus.***Microporellus dealbatus** (B. & C.)

*Polyporus dealbatus* B. & C. Ann. Mag. Nat. Hist. II. **12**: 432.  
1853.

*Polyporus mutabilis* B. & C. Ann. Mag. Nat. Hist. II. **12**: 433.  
1853.

*Polyporus petaliformis* B. & C. Jour. Linn. Soc. Bot. **10**: 307.  
1868.

*Polyporus polygrammus* B. & C. Jour. Linn. Soc. Bot. **10**: 307.  
1868.

*Polyporus Ravenelii* B. & C. Grevillea **1**: 38. 1872. *Polystictus*  
*cretatus* Cooke, Trans. Bot. Soc. Edinburgh **13**: 137. 1878.

This remarkably variable plant was originally described from the collections of Curtis in South Carolina, and has since been published by the same authors under several different names. The types at Kew show abundant variations, but no good characters for specific separation. The species ranges southward to the West Indies and into South America, where it has doubtless received other names.

Collections are at hand from South Carolina, *Ravenel*; Georgia, *Ricker*; Florida, *Ravenel*; Louisiana, *Langlois*; Alabama, *Peters*,



Beaumont, Earle; Cuba, Earle, Underwood & Earle 758, 793, 1104a, 1316, 1319, 1446.

**Microporellus holotephrus** (B. & C.)

*Polyporus holotephrus* B. & C. Jour. Linn. Soc. Bot. **10**: 315. 1868.

Described as follows from no. 352 of Wright's Cuban collections, although Guiana (*Leprieur* 929) is mentioned as the habitat.

"Luridus; pileo tenui coriaceo flabelliformi, e basi attenuata lineato, hic illic vinoso-tincto zonato, zonis alternis subtiliter velutinis scabris brunneis; poris 5-6-gonis brevibus minimis.

"On dead wood. Pileus  $2\frac{1}{2}$  inches broad, 2 inches long, radiato-lineate; pores  $\frac{1}{200}$  inch in diameter. A very curious species."

This peculiar plant, known only from the original collections, now at Kew, bears a very close resemblance to *M. dealbatus* in every respect except color. One could almost believe that a few very young plants of *M. dealbatus* had for some cause turned entirely black in drying, if the numerous other collections of this species indicated the slightest tendency in that direction. Another difference is the size of pores, those of *M. holotephrus* being entirely inconspicuous to the unaided eye.

22. POLYPORUS (Mich.) Paul. Icon. Champ. *pl.* 13. 1793.

Type: *Polyporus Ulmi* Paul.

*Polyporus* (Mich.) Adans. Fam. **2**: 10. 1763. Not associable with a previously published binomial.

*Polyporellus* Karst. Medd. Soc. Faun. et Fl. Fenn. **5**: 37. 1879.

Type: *Polyporus brumalis* Fr.

*Leucoporus* Quél. Ench. Fung. 165. 1886. Type: *Leucoporus tubarius* Quél.

*Cerioporus* Quél. Ench. Fung. 167. 1886. Type: *Boletus squamosus* Huds.

*Melanopus* Pat. Hymén. Europ. 137. 1887. Type: *Melanopus squamosus* (Huds.) Pat.

Hymenophore annual, epixylous, small and simple, very rarely large and compound; stipe central, excentric or lateral, much reduced at times in a few species, often partly or wholly brown or black; surface usually smooth, the margin at times ciliate; context white or yellowish, fibrous, tough to corky; hymenium, porose, rarely alveolate; spores smooth, hyaline.

Species: *P. hydnceps* B. & C., *P. scabriceps* B. & C., *P. virgatus* B. & C., *P. delicatus* B. & C., *P. dibaphus* B. & C., *P. polyporus* (Retz) Murr., *P. Tuba* B. & C., *P. craterellus* B. & C., *P. Acicula* B. & C., *P. discoidens* B. & C., *P. phacoxanthus* B. & Mont., *P. columbicnsis* Berk., *P. obolus* Ell. & Macbr., *P. aemulans* B. & C., *P. arculariellus* Murr., *P. arcularius* (Batsch) Fr., *P. variiporus* Murr., *P. Tricholoma* Mont., *P. Cowellii* Murr., *P. caudicinus* (Scop.) Murr., *P. maculosus* Murr., *P. elegans* (Bull.) Fr., *P. fissus* Berk., *P. arculariformis* Murr. [See Bull. Torrey Club **31**: 29-44, 1904; and Torrey Club **4**: 150, 151. 1904.]

#### Synopsis of the Polyporeae with bright-colored context

Hymenophore sessile or subsessile.

Pores yellow.

Context thick and fleshy, plants very large.

1. *Laetiporus*.

Context thin; plants small.

2. *Flaviporellus*.

Pores red.

Context very soft and spongy, tubes large and irregular.

3. *Aurantiporellus*.

Context firm, tubes small.

Surface anoderm, tubes fragile.

Tubes orange-colored, becoming dark and resinous on drying.

4. *Aurantiporus*.

Tubes remaining orange-colored, or fading slightly.

5. *Pycnoporellus*.

Surface pelliculose, tubes firm and regular.

6. *Pycnoporus*.

Hymenophore distinctly stipitate; context yellow.

7. *Phaeolopsis*.

#### 1. LAETIPORUS Murr. Bull. Torrey Club **31**: 607. 1904

Type: *Agaricus speciosus* Batarr.

Hymenophore annual, epixylous, fleshy, anoderm, cespitose-multiplex; context cheesy to fragile, light-colored, tubes thin-walled, fragile, bright-yellow, mouths irregularly polygonal; spores smooth, hyaline.

Species: *L. speciosus* (Batarr.) Murr. [See Bull. Torrey Club **31**: 607, 608. 1904.]

#### 2. Flaviporellus gen. nov.

Type: *Polyporus Splitgerberi* Mont.

Hymenophore small, annual, epixylous, sessile or substipitate, flabelliform, yellow throughout; surface anoderm, margin thin; context very thin and friable; tubes small, thin-walled, fragile; spores smooth, hyaline or yellowish.

**Flaviporellus Splitgerberi** (Mont.)

*Polyporus Splitgerberi* Mont. Ann. Sci. Nat. Bot. II. 16: 109.  
1841. Syll. Crypt. 164. 1856.

*Polyporus sulphuratus* Fr. Nov. Symb. 79. 1851.

*Polyporus rheicolor* B. & C. Jour. Linn. Soc. Bot. 10: 313. 1868.

This plant was described from Surinam, Mexico and Cuba successively. It is apparently rare, being known chiefly from type collections at Kew, Paris and Upsala.

3. **Aurantiporellus** gen. nov.

Type: *Polyporus alboluteus* Ell. & Ev.

Hymenophore large, annual, epixylous, effused, immarginate or narrowly reflexed; surface azonate, soft, anoderm and orange-colored when young, becoming slightly encrusted and darker with age; context orange-colored, extremely soft and spongy throughout; tubes orange-colored, very large, thin-walled, irregular, lacerate, fragile; spores smooth, hyaline.

**Aurantiporellus alboluteus** (Ell. & Ev.)

*Fomes alboluteus* Ell. & Ev. Proc. Acad. Sci. Phila. 1895: 413.  
1895.

Described from material collected by Crandall on decayed trunks of *Abies subalpina* in Colorado as follows:

"Effused and laterally connate for several centimeters, about 1 cm. thick and 5-6 cm. broad, immarginate and entirely resupinate or, in some specc. with a very slight, reflexed margin of soft, spongy texture and light orange color within and without. Pores large, 1-2 mm. diam., with a thin, membranaceous, white, toothed margin."

In 1898 (Bull. Torrey Club 25: 513), the authors add the following notes:

"Additional specimens and notes of this species show that it is a *Polyporus* and not a *Fomes*. In the fresh growing state it is very juicy and absorbs moisture to a remarkable degree so that water may be squeezed out of it as from a sponge. Some specimens were 3-4 cm. thick. When mature the pores are prolonged on one side so as to resemble the teeth of an *Irpex*. The spores are oblong, hyaline,  $8-12 \times 3 \mu$ . Allied to *Polyporus leucospongia* Cke. & Hark."

This species has apparently been found by only two botanists. The type plants were collected July 10, 1894, by C. S. Crandall, *no. 50*, upon charred trunks of *Abies* on the crest of the continental divide, Colorado, at an altitude of 3,000 meters. Specimens were later collected by Bethel, *no. 280*, at Climax, Colorado, at a height of 3,390 meters, on the ends of decaying coniferous logs projecting from the snow.

#### 4. **Aurantiporus** gen. nov.

Type: *Polyporus Pilotae* Schw.

Hymenophore large, annual, epixylous, sessile, dimidiate; surface anoderm, sodden, bibulous, reddish-orange, soon fading; context reddish-yellow, fleshy-tough to woody, juicy when fresh, rigid when dry, conspicuously zonate; tubes small, slender, thin-walled, brilliant orange when fresh, becoming dark, resinous and fragile on drying; spores smooth, hyaline.

#### **Aurantiporus Pilotae** (Schw.)

*Polyporus Pilotae* Schw. Trans. Am. Phil. Soc. **4**: 156. 1834.

*Polyporus Pini-canadensis* Schw. Trans. Am. Phil. Soc. **4**: 157. 1834.

*Polyporus hypococcinus* Berk. Lond. Jour. Bot. **6**: 319. 1847.

This brilliantly colored species was first described from specimens collected on Pilot mountain, North Carolina, growing on a chestnut log. According to Morgan these specimens had lost their brilliancy when Schweinitz found them, which partly accounts for Berkeley's redescription of the species under the name of *P. hypococcinus* when Lea's younger plants were sent him from Ohio. Original specimens examined at Kew and at Philadelphia are excellently preserved and show the two species to be synonymous. No specimens are to be found, however, of *P. Pini-canadensis*, which Berkeley & Curtis in their commentary on Schweinitz's Synopsis say is certainly the same as *P. hypococcinus*. This species was described from plants found in a pine swamp near Mauch Chunk, Pennsylvania, growing on a trunk of *Pinus canadensis*, according to Schweinitz. It is possible that he was mistaken in the host. Specimens collected by Nuttall on dead deciduous logs in West Virginia are also resupinate and agree well with the description of *P. Pini-canadensis*. *P. Pilotae* and *P. hypococcinus* are only known to occur on very much decayed wood of oak and chestnut.

This species is quite rare, but those who have found it have made good notes on its appearance when fresh; attracted, no doubt, by its striking appearance. As I have observed it growing on old logs at Blacksburg, Virginia, the sporophores are ochraceous to reddish-orange at first, the pileus becoming paler and the hymenium darker with age. The substance within is honey-yellow, changing to reddish, and very zonate. On account of the rather fleshy and sodden character of the sporophore there is considerable shrinkage and change of form on drying. Specimens have been examined from Canada, *Dearness*; Iowa, *Macbride*; Delaware, *Commons* (?); Pennsylvania, *Sumstine*, *Murrill*; West Virginia, *Nuttall*; Virginia, *Murrill*; Ohio, *Morgan*.

#### SPECIES INQUIRENDÆ

POLYPORUS FIMBRIPORUS Schw. Trans. Am. Phil. Soc. 4: 155. 1834. Collected on small fallen chestnut limbs at Bethlehem, Pennsylvania, and described as follows:

"P. subtriangularis, substantia carnosâ, aquosâ spongiosa, omnino *P. mollis*. Pileo glabro, pallido, siccitate ruguloso et contracto volumine. Poris albescentibus, rotundis, minutis, circum apices mire fimbriato ciliatis. Diametro unciali. Tempore sicco indurescit."

The above description agrees in many ways with young stages of *A. Pilotae*, but this latter species has never been collected on small limbs, its usual hosts being much-decayed chestnut or oak logs. The remains of the type specimens at Philadelphia also show a close relationship to *A. Pilotae*.

POLYPORUS CASTANOPHILUS Atk. Jour. Myc. 8: 118. 1902. Collected by Atkinson at Blowing Rock, North Carolina, September 1901 (*no. 10072* Cornell Univ. Herb.), and thus described:

"Pileus dimidiate, sessile, convex, 10-20 cm. broad, 10-12 cm. long, zonate, more or less rugose and sometimes tomentose toward the base, reddish yellow to reddish orange, flesh yellowish, zoned, soft and watery but tough and drying somewhat shrunken but hard and firm. Tubes plane, medium size, dissepiments thin, edges very finely fimbriate, chrome yellow to bright orange, drying dull yellow or reddish brown, tubes 6-8 mm. long. Basidia clavate, 15-20  $\times$  4-5  $\mu$ , 4-spored. Spores white, hyaline, smooth, with a few granules, 3  $\times$  2  $\mu$ . On decorticated and one-half rotted chestnut logs."

Although I have not been able to examine the plants described above, there seems to be little doubt that they are referable to *A. Pilotac.*

5. **Pycnoporellus** gen. nov.

Type: *Polyporus fibrillosus* Karst.

Hymenophore annual, epixylous, sessile, dimidiate, simple or imbricate, reddish or orange-colored throughout; surface anoderm, margin thin; context thin, friable; tubes thin-walled, fragile, at length lacerate; spores smooth, hyaline or pale yellowish.

**Pycnoporellus fibrillosus** (Karst.).

*Polyporus fibrillosus* Karst. Sydv. Finl. Polyp. 30. 1859.

*Polyporus aurantiacus* Peck, Rep. N. Y. State Mus. Nat. Hist. 26: 69. 1874.

*Inonotus fibrillosus* Karst. Bidr. Finl. Nat. och Folk 37: 72. 1882.

In 1876 Karsten considered this species synonymous with *Polyporus vulpinus* Fr., but later said the two were very different. According to Bresadola, *Ochroporus lithuanicus* Blonski (Hedwigia 281. 1889) is a true synonym of *P. fibrillosus*.

This species is rarely found in Asia, Europe and northern North America on decaying logs of fir, spruce and other conifers. Its bright colors make its discovery easy, while the fragile tubes and rigid, friable context distinguish it readily from *Pycnoporus cinnabarinus*.

Finland, *Karsten*; Canada, *Macoun*; New York, *Peck*; Vermont, *Burt*; Colorado, *Bethel*; Oregon, *Carpenter*.

6. **PYCNOPORUS** Karst. Rev. Myc. 3<sup>o</sup>: 18. 1881

Type: *Bolctus cinnabarinus* Jacq.

Hymenophore annual, sometimes reviving, epixylous, sessile, dimidiate, simple or imbricate, rarely pseudo-stipitate; surface anoderm, slightly pelliculose at times, zonate or azonate, bright or dull red; context red, soft-corky to punky; hymenium concolorous, tubes small, firm, thin-walled; spores smooth, hyaline.

Species: *P. cinnabarinus* (Jacq.) Karst., *P. sanguineus* (L.) Murr. [See Bull. Torrey Club 31: 420, 421. 1904.]

7. **Phaeolopsis** gen. nov.

Type: *Polyporus Vrae-crucis* Berk.

Hymenophore annual, epixylous, stipitate; surface azonate,

anoderm, yellow or brown; margin acute; context yellow, fleshy to tough and fibrous, not friable; tubes yellow, regular, minute, thin-walled; spores smooth, hyaline: stipe excentric or lateral with substance and surface like that of the pileus.

**Phaeolopsis Verae-crucis** (Berk.)

*Polyporus Verae-crucis* Berk. Ann. Mag. Nat. Hist. 10: Suppl.

369. pl. 9-12. 1843.

Described from plants collected on the roots of trees at Vera Cruz, August, 1854. Type plants at Kew are in an excellent state of preservation. The context of these herbarium specimens is dark yellowish-orange and the stipe excentric or lateral.

SUBFAMILY 2. FOMITEAE

**Synopsis of the Fomitae with white or flesh-colored context**

Tubes at first concealed by a volva.

1. *Cryptoporus*.

Tubes free from the first.

Surface of hymenophore covered with reddish-brown varnish;  
context corky.

2. *Ganoderma*.

Surface of hymenophore not as above, or, if so, context woody.

3. *Fomes*.

1. **CRYPTOPORUS** Shear, Bull. Torrey Club 29: 450. 1902

Type: *Polyporus volvatus* Peck.

Hymenophore subglobose, sessile, epixylous; surface smooth, encrusted; context white, corky; tubes white, concealed at first by a volva, which breaks at one or more points at maturity; mouths constricted, discolored; spores smooth, hyaline.

Species: *C. volvatus* (Peck) Shear. [See Bull. Torrey Club 30: 423, 424. 1903.]

2. **GANODERMA** Karst. Rev. Myc. 3<sup>o</sup>: 17. 1881

Type: *Boletus lucidus* Leyss.

*Placodes* Quél. Ench. Fung. 170. 1886. Type: *Boletus lucidus* Leyss.

*G. Tsugae* Murr. and a few other species of this genus might be classed with white-fleshed forms, especially in their early stages. [See Bull. Torrey Club 29: 599-608. 1902].

3. **FOMES** Gill. Champ. Fr. 1: 682. 1878

Type: *Polyporus marginatus* Fr.

*Fomitopsis* Karst. Rev. Myc. 3<sup>o</sup>: 18. 1881 Type: *Boletus pini-cola* Sw.

*Heterobasidion* Bref. Unters. 8: 154. 1889. (Not *Heterobasidium* Mass. 1888.) Type: *Polyporus annosus* Fr.

Hymenophore sessile, unguulate or applanate, epixylous; surface anoderm or encrusted, sulcate, rarely zonate; context white or flesh-colored, woody, rarely punky; tubes cylindrical, concolorous, usually thick-walled, stratose; pores smooth, hyaline.

Species: *F. rosceus* (Alb. & Schw.) Cooke, *F. annosus* (Fr.) Cooke, *F. unguatus* (Schaeff.) Sacc., *F. Ellisianus* Anders., *F. fraxinophilus* (Peck) Sacc., *F. ligneus* (Berk.) Cooke, *F. stipitatus* Murr., *F. perpusillus* (Pers.) Cooke, *F. scutellatus* (Schw.) Cooke, *F. Laricis* (Jacq.) Murr., *F. populinus* (Schum.) Cooke, *F. Meliae* (Underw.) Murr., *F. rubritinctus* Murr., *F. geotropus* Cooke. [See Bull. Torrey Club 30: 225-232. 1903.]

An original specimen of Persoon's *Polyporus perpusillus*, published by L  veill   in 1844, shows this plant to be the same as *Trametes ohimensis* Berk., published in 1872. Persoon's name, therefore, must be adopted instead of the one under which the species is commonly known. Considering the very small size of the species, the older name seems exceedingly appropriate.

To the above list of species should be added **Fomes Auberianus** (*Polyporus Auberianus* Mont. Pl. Cell. Cuba 397. 1842), described from Cuban plants collected by Auber. It is a large and striking species found on wounded trunks or dead logs of hardwood trees throughout tropical America. Material is at hand from Cuba, Earle, Earle & Wilson 253, Earle & Murrill 4; Porto Rico, Wilson 32; St. Kitts, Britton & Corwell 328; Martinique, Duss; Mexico, Smith.

### SUBFAMILY 3. AGARICEAE

#### Synopsis of the Agariceae with white context

Surface glabrous, hymenium usually labyrinthiform.	1. <i>Agaricus</i> .
Surface pubescent or hirsute.	
Hymenium at first labyrinthiform, soon becoming irpiciform.	2. <i>Cerrena</i> .
Hymenium lamellate, not becoming irpiciform.	3. <i>Lenzites</i> .

#### 1. AGARICUS (Dill.) L. Sp. Pl. 1176. 1753

Type: *Agaricus quercinus* L.

*Striglia* Adans. Fam. 2: 10. 1763. Type: *Agaricus quercinus* L.  
*Daedalea* Pers. Syn. Fung. 499. 1801. Type: *Agaricus quercinus* L.



*Daedaleopsis* Schroet. Krypt. Fl. Schles. **3**: 492. 1888. Type: *Boletus confragosus* Bolt.

Hymenophore epixylous, usually large and annual, sessile, applanate to ungulate; surface anoderm, glabrous, often zonate: context white or wood-colored, rigid, woody or punky: hymenium normally labyrinthiform, but varying to lamellate and porose in some species: spores smooth, hyaline.

Species: *A. quercinus* L., *A. juniperinus* Murr., *A. confragosus* (Bolt.) Murr., *A. Aesculi* (Schw.) Murr., *A. deplanatus* (Fr.) Murr. [See Bull. Torrey Club **32**: 83-95. 1905.]

2. CERRENA S. F. Gray Nat. Arr. Brit. Pl. **1**: 649. 1821

Type: *Boletus unicolor* (Bull.) Bolt.

*Phyllostoma* Karst. Hedwigia **22**: 163. 1883. Type: *Phyllostoma Magnusii* Karst.

Hymenophore small, epixylous, sessile, conchate, annual; surface anoderm, hairy, zonate or sulcate; context thin, white, fibrous, flexible; hymenium at first labyrinthiform, soon becoming irpici-form from the splitting of the dessepiments; spores smooth, hyaline.

Species: *C. unicolor* (Bull.) Murr. [See Bull. Torrey Club **32**: 97-99. 1905.]

3. LENZITES Fr. Gen. Hymen. **10**. 1836

Type: *Daedalea betulina* (L.) Fr.

Hymenophore small, annual, epixylous, sessile, conchate: surface anoderm, usually zonate and tomentose; context white, coriaceous, flexible; hymenium lamellate, the radiating gill-like dissepiments connected transversely at times, especially in youth; spores smooth, hyaline.

Species: *L. betulina* (L.) Fr., *L. cubensis* B. & C. [See Bull. Torrey Club **32**: 95-97. 1905.]

NEW YORK BOTANICAL GARDEN.

**Index to genera**

Abortiporus . . . . .	483	Irpiciporus . . . . .	471
Agaricus . . . . .	491	Laetiporus . . . . .	485
Aurantiporellus . . . . .	486	Lenzites . . . . .	492
Aurantiporus . . . . .	487	Microporellus . . . . .	483
Bjerkandera . . . . .	477	Phaeolopsis . . . . .	489
Cerrena . . . . .	492	Piptoporus . . . . .	473
Coriolellus . . . . .	481	Polyporus . . . . .	484
Coriolus . . . . .	480	Porodiscus . . . . .	482
Cryptoporus . . . . .	490	Poronidulus . . . . .	480
Cubamyces . . . . .	480	Pycnoporus . . . . .	489
Dendrophagus . . . . .	473	Pycnoporellus . . . . .	489
Earliella . . . . .	478	Rigidoporus . . . . .	478
Favolus . . . . .	471	Scutigera . . . . .	482
Flaviporellus . . . . .	485	Spongipellis . . . . .	474
Fomes . . . . .	490	Spongiporus . . . . .	474
Ganoderma . . . . .	490	Trametes . . . . .	477
Grifola . . . . .	481	Tyromyces . . . . .	477
Hexagona . . . . .	470		